

PATENT  
(5681-67300/P9675)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/696,891  
Filed: October 30, 2003  
Inventor(s):  
Robert E. Cypher

Examiner: Unknown  
Group/Art Unit: 2131  
Atty. Dkt. No: 5681-67300

Title: **ECC FOR COMPONENT  
FAILURES USING  
GALOIS FIELDS**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

Lawrence J. Merkel

Name of Registered Representative

Signature

Date

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicant requests consideration of ☒ the references listed on the attached Form PTO-1449 and/or ☐ the additional information identified below in paragraph 3.

- ☐ A copy of each required reference listed on the Form PTO-1449 is enclosed.
- ☐ The references listed on the Form PTO-1449 were previously cited in application serial no. \_\_\_\_\_ to which the captioned application is seeking priority under 35 U.S.C. § 120; therefore, a copy of each reference is not enclosed.
- ☐ The present application is a U.S. national patent application filed after June 30, 2003, or an international application that entered the national stage under 35 USC § 371 after June 30, 2003. Therefore, copies of the cited U.S. patents and/or U.S. patent application publications are not enclosed.

1. This Information Disclosure Statement is submitted:

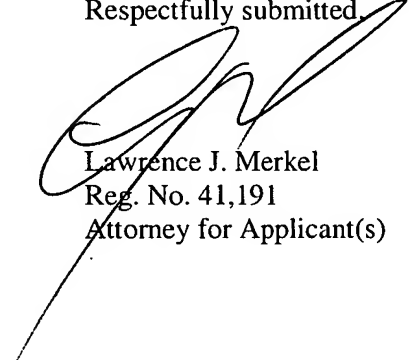
- a. ☐ within 3 months of the filing date of a national application other than a continued prosecution application under § 1.53(d);

- ☐ within 3 months of the date of entry of the national stage as set forth in § 1.491 in an International application;
- ☒ before the mailing date of a first Office Action on the merits; or
- ☐ before the mailing of a first Office Action after the filing of a request for continued examination under § 1.114.
- b. ☐ after the events of above paragraph 1a and prior to the mailing date of a final Office Action or Notice of Allowance, and thus: ☐ the certification of paragraph 2 below is provided, or ☐ a fee of \$180.00 is enclosed.
- c. ☐ after the mailing date of a final Office Action or a Notice of Allowance and prior to payment of the issue fee, and thus: the certification of paragraph 2 below is provided and a fee of \$180.00 is enclosed.
2. It is hereby certified:
- ☐ that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in § 1.56(c) more than thirty (30) days prior to the filing of the information disclosure statement;
- ☐ that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of the Statement; or
- ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in § 1.56 (c) more than three (3) months prior to the filing of the Statement.
3. ☐ Consideration of the following additional information (including any co-pending or abandoned U.S. applications, prior uses and/or sales, etc.) is requested:
4. For each non-English language reference listed on the attached Form PTO-1449:
- ☐ reference is made to an English language translation submitted herewith, and/or
- ☐ reference is made to a foreign patent office search report (in the English language) submitted herewith, and/or
- ☐ reference is made to an English language translation of a foreign patent office search report submitted herewith, and/or
- ☐ reference is made to the concise explanation contained in the specification of the present application at page(s) \_\_\_\_\_, and/or
- ☐ reference is made to the concise explanation set forth below:

5. ☐ Applicant also offers the following comments for the Examiner's consideration:
6. ☐ Also enclosed is a copy of a foreign search report citing these references.
7. ☐ The listed documents were brought to the attention of the Applicant(s) after payment of the issue fee in the captioned case. The documents were cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. Applicant(s) request this Information Disclosure Statement and attached Form PTO-1449 be placed in the file of the captioned application.
8. ☐ Applicant(s) requests that the Information Disclosure Statement and attached Form PTO-1449 and references, which are being filed before the grant of the patent and pursuant to 37 C.F.R. § 1.97(i), be placed in the file of the captioned application.

If any required fees are missing, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account No. 501505/5681-67300/LJM.

Respectfully submitted,

  
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(512) 853-8800

Date: 4/14/05

<b>Form PTO-1449</b> (modified) List of Patents and Publications For Applicant's Information Disclosure Statement (Use several sheets if necessary)			ATTY. DKT. NO. 5681-67300 APPLICANT: Robert E. Cypher FILING DATE: October 30, 2003		SERIAL NO. 10/696,891 GROUP: 2131		
<b>U.S. PATENT DOCUMENTS</b>							
EXAM. INITIALS	REF. DES.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	E1	2001/0001158	5/10/01	Tetrick			
	E2	6246616	6/12/01	Nagai, et al			
	E3	6233717	5/15/01	Choi			
	E4	6223301	4/24/01	Santeler, et al			
	E5	6209113	3/27/01	Roohparvar			
	E6	6181614	1/30/01	Aipperspach, et al			
	E7	6167495	12/26/00	Keeth, et al			
	E8	6158025	12/5/00	Brisse, et al			
	E9	6141789	10/31/00	Cypher			
	E10	6115828	9/5/00	Tsutsumi, et al			
	E11	6101614	8/8/00	Gonzales, et al			
	E12	6076182	6/13/00	Jeddeloh			
	E13	6065102	5/16/00	Peters, et al			
	E14	6044483	3/28/00	Chen, et al			
	E15	6070255	5/30/00	Dell, et al			
	E16	6052818	4/18/00	Dell, et al			
	E17	6038680	3/14/00	Olarig			
	E18	6018817	1/28/00	Chen, et al			
	E19	6009548	12/28/99	Chen, et al			
	E20	5987628	11/16/99	Von Bokern, et al			
	E21	5978952	11/2/99	Hayek, et al			
	E22	5953265	9/14/99	Walton, et al			
	E23	5928367	7/27/99	Nelson, et al			
	E24	5923682	7/13/99	Seyyeddy			
	E25	5909541	6/1/99	Sampson, et al			
	E26	5872790	2/16/99	Dixon			
	E27	5822257	10/13/98	Ogawa			

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the patent owner.

Information Disclosure Statement--PTO 1449 (modified)

<b>Form PTO-1449</b> (modified) List of Patents and Publications For Applicant's Information Disclosure Statement (Use several sheets if necessary)	ATTY. DKT. NO. 5681-67300  APPLICANT: Robert E. Cypher  FILING DATE: October 30, 2003	SERIAL NO. 10/696,891  GROUP: 2131
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**U.S. PATENT DOCUMENTS**

EXAM. INITIALS	REF. DES.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	E28	5758056	5/26/98	Barr			
	E29	5682394	10/28/97	Blake, et al			
	E30	5640353	6/17/97	Ju			
	E31	5502675	3/26/96	Kohn, et al			
	E32	5490155	2/6/96	Abdoo, et al			
	E33	5291496	3/1/94	Andaleon, et al			
	E34	5276834	1/4/94	Mauritz, et al			
	E35	5255226	10/19/93	Ohno, et al			
	E36	5233614	8/3/93	Singh			
	E37	5228046	7/13/93	Blake, et al			
	E38	5164944	11/17/92	Benton, et al			
	E39	5077737	12/31/91	Leger, et al			
	E40	5058115	10/15/91	Blake, et al			
	E41	4604751	8/5/86	Aichelmann, Jr., et al			
	E42	4584681	4/22/86	Singh, et al			
	E43	4376300	3/8/83	Tsang			
	E44	5,463,644	10-1995	Rodi et al.			
	E45	4,434,459	2-1984	Holland et al.			
	E46	6,505,305	1-2003	Olarig, Sompong P.			
	E47	2003/0093744	5-2003	Leung et al.			
	E48	2003/0163777	8-2003	Holt, Keith W.			
	E49	2003/0133611	12-2003	Humlicek et al.			
	E50	5,867,642	2/2/99	Vivio, et al.			
	E51	5,757,823	5/26/98	Chen, et al.			

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

	E52	Polianskikh, B. et al., "design and Implementation of Error Detection and Correction Circuitry for Multilevel Memory Protection," Multiple-Valued Logic 2000. ISMVL 2002. Proceedings 32 <sup>nd</sup> IEEE International Symposium on 5-18 May 2002, Pages 89-95
	E53	K. A. S. Immink, "A Practical Method for Approaching the Channel Capacity of Constrained Channels," September 1997, IEEE Transactions on Information Theory, Vol. 43, No. 5, Pages 1389-1399

EXAMINER:

DATE CONSIDERED:

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